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ABSTRACT

Designed to complement the traditional textbook treatment of Columbus, the lessons in this packet utilize recent research, primary sources, and active student involvement. The first two lessons, "Columbus: The Man and the Myth" and "Columbus and the Known World: How Much Did He Really Know?," (D. Beal) provide students with opportunities to learn about Columbus as a person and dispel the commonly-held view that everyone in 1492 believed the world was flat. "Who Discovered America?" (C. Risinger) uses cooperative learning techniques to teach about other explorers who preceded Columbus and why his voyage receives the most attention. "A Mystery in History" (E. Holt) examines the current debate about the actual site where Columbus landed on October 12, 1492. The second Holt lesson, "Columbus and the New World: Through European Eyes," examines the persistence of ethnocentrism when two different cultures are brought together. "The Ecological Consequence of 1492" (A. Backler) focuses instruction on the ecological impact for North America of the linking of the Old and New Worlds that began with Columbus's voyages. All of the lessons include student objectives and instructional procedures. Most have student worksheets, readings, maps, or other materials to assist in lesson implementation. All materials can be duplicated for classroom use. Teachers are urged to adapt and modify the lessons to fit specific curriculum or student needs. (JB)

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TEACHING ABOUT THE VOYAGES OF COLUMBUS: A TURNING POINT IN WORLD HISTORY

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SIX LESSONS FOR SECONDARY U.S. HISTORY CLASSES

A PROJECT OF THE SOCIAL STUDIES DEVELOPMENT CENTER AT INDIANA UNIVERSITY IN ASSOCIATION WITH THE INDIANA COUNCIL FOR THE SOCIAL STUDIES

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TEACHING ABOUT THE VOYAGES OF COLUMBUS: A TURNING POINT IN WORLD HISTORY

Six Lessons For Secondary
United States History Classes

by

Alan Backler
David Beal
Evelyn Holt
C. Frederick Risinger

THIS PROGRAM MADE POSSIBLE
THROUGH A MATCHING GRANT FROM

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CLASSROOM LESSONS FOR TEACHING ABOUT THE VOYAGES OF COLUMBUS

The lessons in this packet were written by current or former classroom teachers as a part of the project, "Teaching About the Voyages of Columbus: A Turning Point in World History." The project was sponsored by the Social Studies Development Center at Indiana University in association with the Indiana Council for the Social Studies and funding from the Indiana Humanities Council. The project's primary activity was a conference held on April 6, 1989, at Ball State University.

The lessons are appropriate for both junior high/middle school students and those at the high school level. Designed to complement the traditional textbook treatment of Columbus, they utilize recent research, primary sources, and active student involvement. In the first two lessons, "Columbus: The Man and the Myth" and "Columbus and the Known World: How Much Did He Really Know?," David Beal provides students with opportunities to learn about Columbus as a person and dispels the commonly-held view that everyone in 1492 believed the world was flat. In "Who Discovered America?," C. Frederick Risinger uses cooperative learning techniques to teach about other explorers who preceded Columbus and why his voyage receives the most attention. Evelyn Holt in "A Mystery in History" examines the current debate about the actual site where Columbus landed on October 12, 1492. Her second lesson, "Columbus and The New World: Through European Eyes," examines the persistence of ethnocentrism when two different cultures are brought together. Alan Backler in "The Ecological Consequence of 1492" bases a lesson on Professor Alfred Crosby's keynote address at the conference.

All of the lessons include student objectives and instructional procedures. Most have student worksheets, readings, maps, or other materials to assist in lesson implementation. All materials can be duplicated for classroom use. Teachers are urged to adapt and modify the lessons to fit specific curriculum or student needs.

CHRISTOPHER COLUMBUS

A Timetable of Events in his Life

1451 -- Columbus is born in Genoa, Italy.

1476 -- He arrives in Portugal following a shipwreck.

1477 -- He works with his brother in Lisbon, Portugal.

1479 -- Columbus marries Dona Felipa.

1480 -- A son, Diego, is born.

1482 -- Columbus participates in a Portuguese expedition along the northwest coast of Africa.

1484 -- Columbus asks King John II of Portugal to support a voyage across the Western Ocean to the Indies; his request is denied.

-- His wife dies.

1486 -- Columbus has his first meeting with Queen Isabela and King Ferdinand of Spain; he requests support for an expedition across the Western Ocean to the Indies; the request is denied.

1487 -- Bartolomeu Dias sails from Portugal around the Cape of Good Hope, the southern tip of Africa.

1488 -- Columbus visits Lisbon, Portugal, to reopen negotiations with King John II and witnesses the triumphant return of Dias; he gives up hope of gaining support from King John for an expedition across the Western Ocean.

-- Columbus's second son, Fernando, is born to Beatrize Enriquez de Harana.

1492 -- Reconquest of Spain from the Moors is completed with the fall of Granada.

-- Queen Isabela and King Ferdinand agree to support Columbus's proposed expedition.

-- In August, Columbus leaves Palos with three ships on his first voyage across the Western Ocean.

-- In October, Columbus reaches an island in the Bahamas, naming it San Salvador.

-- In December the Santa Maria is wrecked; men are left on the island of Hispaniola and establish a post, La Navidad.

Ha

1493 -- In March, Columbus returns to Spain.

-- In September, Columbus embarks on his second voyage with seventeen ships and 1,200 men.

-- In November, Columbus returns to La Navidad and finds this post destroyed.

1494 -- In January, Columbus plants a second colony on Hispaniola and names it Isabela.

1496 -- The Isabela settlement fails. A new and permanent city of Santo Domingo is founded.

-- In June, Columbus returns to Spain and completes his second voyage.

1497 -- Vasco de Gama sails from Portugal around the southern end of Africa to India.

1498 -- Columbus makes his third voyage.

1499 -- Vasco de Gama returns to Portugal from India, having sailed home around the Cape of Good Hope at the southern tip of Africa.

1500 -- Columbus is sent back to Spain as a prisoner after rebellions and charges of mismanagement had undermined his authority; Columbus wins his freedom and defends his honor, but does not regain the power he had held.

1502 -- Columbus makes his fourth and final voyage across the ocean.

1504 -- Columbus returns to Spain, never to sail away again.

1506 -- Christopher Columbus dies in May.

Two sources were used to construct this timetable:

(1) William L. Langer, An Encyclopedia of World History, 5th Edition (Boston: Houghton Mifflan Company, 1972).

(2) Richard B. Morris, Encyclopedia of American History, 6th Edition (New York: Harper & Row, 1982).

COLUMBUS: THE MAN BEHIND THE MYTH

David Beal
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Preview

The purpose of this lesson is to examine primary sources on the life of Christopher Columbus. By presenting two abstracts of works on Columbus, the lesson is intended to provide students with a look at Columbus from the words of earlier historians and experts.

Curriculum Connection

At the secondary level, the life and times of Christopher Columbus have been reduced in many textbooks to his appearance before Ferdinand and Isabela and his voyages. This lesson can help teachers extend the knowledge that students have of Columbus, his life and those who may have influenced him.

Objectives

Students will be able to:

1. Read selected primary sources for comprehension.
2. Write brief paragraphs that exhibit comprehension of the material.
3. Compare and contrast different accounts of the life of Columbus.

Procedures

Have students read the descriptions of Columbus in handout 1. Divide the class into groups of 4-6 students. Distribute the questions in handout 2 and have each group discuss them to develop a group response. Have each group report on its answers to the entire class.

WHAT TYPE OF PERSON WAS COLUMBUS?

Most of us know that Columbus discovered the new world. But what do we know about him as a person? Most of our textbooks introduce us to Columbus when we study explorers and explorations. These texts tell us almost nothing about Columbus, the man. What was he like? What did he look like? What was his personality? What were his likes and dislikes? Would we have liked this person?

In order to understand the type of person Columbus was, we will look at two abstracts of primary sources. The first is a description of Columbus by his son, Fernando Columbus. Fernando was with his father from ages 12-18 and described his father in this way:

> The Admiral was a well built man of more than medium stature, long visaged with cheeks somewhat high, but neither fat nor thin. He had an aquiline nose and his eyes were light in color; his complexion too was light, but kindling to a vivid red. In youth his hair was blond, but when he came to his thirtieth year it turned all white. In eating and drinking and the adornment of his person he was always continent, moderate, and modest. Among strangers his conversation was affable, and with members of his household very pleasant, but with a modest and pleasing dignity. In matters of religion he was so strict that for fasting and saying all the canonical offices he might have been taken for a member of a religious order. And he was so great an enemy to cursing and swearing, that I swear I never heard him utter any oath other than "by San Fernando" and when he was most angry with anyone, his reprimand was to say, "May God take you!" for doing or saying that. And when he had to write anything, he would not try the pen without first writing these words, "Jesus cum Maria sit nobis in via," and in such fair letters he might have gained his bread by them alone.

The second description is taken from Bartolome de Las Casas, in his <u>Apologetica Historia de las Indias</u>. Las Casas had seen Columbus in 1500 on the island of Hispaniola.

> As regards his exterior person and bodily disposition, he was more than middling tall; face long and giving an air of authority; aquiline nose, blue eyes, complexion light and tending to bright red; beard and hair red when young but very soon turned gray from his labors; he was affable and cheerful in speaking, and, eloquent and boastful in his negotiations; he was serious in moderation, affable with strangers, and with members of his household gentle and pleasant, with modest gravity and discreet conversation; and so could easily incite those who saw him to love him. In

fine, he was most impressive in his port and countenance, a person of great state and authority and worthy of all reverence. He was sober and moderate in eating, drinking, clothing, and footwear; it was commonly said that he spoke cheerfully in familiar conversation, or with indignation when he gave reproof or was angry with somebody: "May God take you, don't you agree with this and that?" or "Why have you done this and that?" In matters of the Christian religion, without doubt he was a Catholic and of great devotion; for in everything he did and said or sought to begin, he always interposed "In the name of the Holy Trinity I will do this," or "launch this" or "this will come to pass." In whatever letter or other thing he wrote, he put at the head "Jesus and Mary be with us on the way." His oath was sometimes, "I swear by San Fernando;" when sought to affirm something of great importance in his letters on oath, especially in writing to the Sovereigns, he said, "I swear that this is true."

He observed the fasts of the Church most faithfully, confessed and made communion often, read the canonical offices like a churchman or member of a religious order, hated blasphemy and profane swearing, was most devoted to Our Lady and to the seraphic father St. Francis; seemed very grateful to God for benefits received from the divine hand, wherefore, as in the proverb, he hourly admitted that God had conferred upon him great mercies, as upon David. When gold or precious things were brought to him, he entered his cabin, knelt down, summoned the bystanders, and said, "Let us give thanks to Our Lord that he has thought us worthy to discover so many good things." He was extraordinarily zealous for the divine service; he desired and was eager for the conversion of these people (the Indians), and that in every region the faith of Jesus Christ be planted and enhanced.

This is how Columbus appeared to those who knew him. We now have a little better idea of the type of man that Columbus was.

Both descriptions taken from:

Morison, Samuel E., Admiral of the Ocean Sea: A Life of Christopher Columbus; Boston: Little, Brown and Co., 1942; p. 44-46.

QUESTIONS FOR DISCUSSION

1. What type of person was Columbus?

   physical characteristics
   emotional make-up
   religion
   social standing

2. In what ways were the accounts of Fernando Columbus and Bartolome de Las Casas similar? How were they different?

3. Which of these characteristics helped Columbus in his attempts to find financial backing for his voyages and in his leadership of the expeditions? Which characteristics may have been a handicap?

COLUMBUS AND THE KNOWN WORLD: HOW MUCH DID HE REALLY KNOW?

David Beal
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Bicknell, Indiana

Overview

The purpose of this lesson is to establish a context for understanding the voyages of Columbus, his calculations, and the size of the "known" world at the time of the explorations. The lesson provides students with activities for establishing a better knowledge of the world at the time of Columbus. While not meant as a definitive study of the world of Columbus, the activities provide an overview of the existing knowledge during Columbus's time and compares this to current knowledge of the world.

Curriculum Connection

At the secondary level, knowledge of the voyages of the early explorers is gleaned mostly from textbooks, which cover the "Age of Exploration." The study of the explorers may vary in coverage from one page to an entire chapter. These activities extend that textbook information and apply it to a geographic setting. The use of maps and handouts will show differences between current knowledge and that available to Columbus.

Objectives

Students will be able to:

1. Calculate the size of the world using Columbus's data.
2. Compare the distance between two places, using the calculations of Columbus and degrees of longitude.
3. Distinguish between current knowledge of the world and knowledge of the world at the time of Columbus.

Procedures

Activity One: Establish the lesson's context by reviewing students' knowledge of the world at the time of Columbus. Use Behaim's chart of 1492 and a current world map to visually reinforce the differences (Handouts 1 and 2).

This can be done in one of two suggested methods:

1.) Using Behaim's chart (Handout 1), have students cut out the outline of the chart and tape this together into a reasonable facsimile of a globe. The chart may not actually fit together, but the students will be able to visualize the globe at the time of Columbus.

2.) Using the world map (Handout 2), have the students fold the map along the dotted lines so that the lines touch and the Western Hemisphere is no longer visible.

This hands-on activity will enable the student to visualize how Columbus believed the world was in 1492. The main purpose of this exercise is to achieve a geographic understanding of the importance of Columbus's voyages in understanding world size. The wealth of new knowledge gained from the voyages of Columbus and other explorers can also be discussed by stressing how the size of the known world was nearly doubled with the voyages.

Activity Two: Using the Toscanelli abstract, students will complete the exercise involving the geographic data (Handout 3). From the data, students will calculate the size of the world and find distances for selected places. A blank world map with lines of longitude and latitude, an atlas, or both, may be needed to complete this exercise. The use of a calculator is optional.

Conclusion

Ask students to make general observations about the importance of the explorations. What have they learned from these exercises?

VIEWS OF THE WORLD DURING THE TIME OF COLUMBUS

What was the popular view of the world during the time of Columbus? We have been led to believe that most people thought the world was flat. The fear of falling off the edge of the earth was matched only by the fear of sea monsters that populated the edges. However, this view is incorrect. Most educated Europeans in 1492 knew that the world was a sphere. The sailors observed that the ocean's surface was curved as they sailed toward the horizon. Using this knowledge, Columbus never really had to persuade King Ferdinand and Queen Isabela that the world was round.

After learning enough Latin to understand the ancient writers, Columbus knew that Aristotle believed the world was smaller than was popularly accepted. From other sources such as Strabo, Pierre d'Ailly, Pope Pius II, the Bible and Seneca, he gleaned similar information concerning the size of the world. All of these sources led Columbus to calculate a circumference of the earth that was considerably smaller than actual size.

Although the scholars of Western Europe believed that the world was round, they had little idea about its actual size. The Greek astronomer Ptolemy, in about 200 A.D., had developed a theory about the earth's circumference that was commonly accepted. But in the late 1200's, Marco Polo, a Venetian merchant, had traveled eastward through Asia as far as China. There he learned of an island called "Cipanjo" (Japan). When he wrote of his discoveries, he claimed that Asia extended much farther eastward. This would make it much closer to Europe. Of course, no one counted on the continents of North and South America being between Asia and Europe.

Most European scholars and sailors thought Marco Polo was a dreamer. His views simply could not be accepted because Ptolemy's theories were considered correct. Finally, Paolo Toscanelli, a physician in Florence, accepted Marco Polo's theories. He wrote several letters that argued that the ocean between Spain and The Indies (islands near Asia) was much narrower than anyone supposed. King Alfonso V of Portugal saw these letters and asked Toscanelli to develop his theories in a letter to him, which Toscanelli did on June 4, 1474.

Toscanelli's letter is the first opportunity we have to observe possible outside influences on Columbus. This letter became Columbus' primary exhibit when arguing for a narrower Atlantic. What is of concern is Toscanelli's insistence that Quinsay (modern Hangchow), capital of the Chinese province of Mangi, is only 500 nautical miles due west of Lisbon, Portugal. When Columbus saw a copy of this letter, he hurriedly wrote to Toscanelli asking for more information. Toscanelli sent Columbus a copy of his earlier letter and a chart (now missing) to illustrate his theories. So Columbus had what he thought was

firm evidence to present to King Ferdinand and Queen Isabela of Spain when he asked them to support his voyage.

Estimates of Distances Between Places on the Earth by Columbus, Toscanelli, and Behaim (Estimates presented in nautical miles)

1. From the Canary Islands to Japan --- 3000 miles (Toscanelli)
   3080 miles (Behaim)
   2400 miles (Columbus)
   10,600 miles (actual)

2. From the Canary Islands to Hangchow, China ---------- 5000 miles (Toscanelli)
   4440 miles (Behaim)
   3550 miles (Columbus)
   11,776 miles (actual)

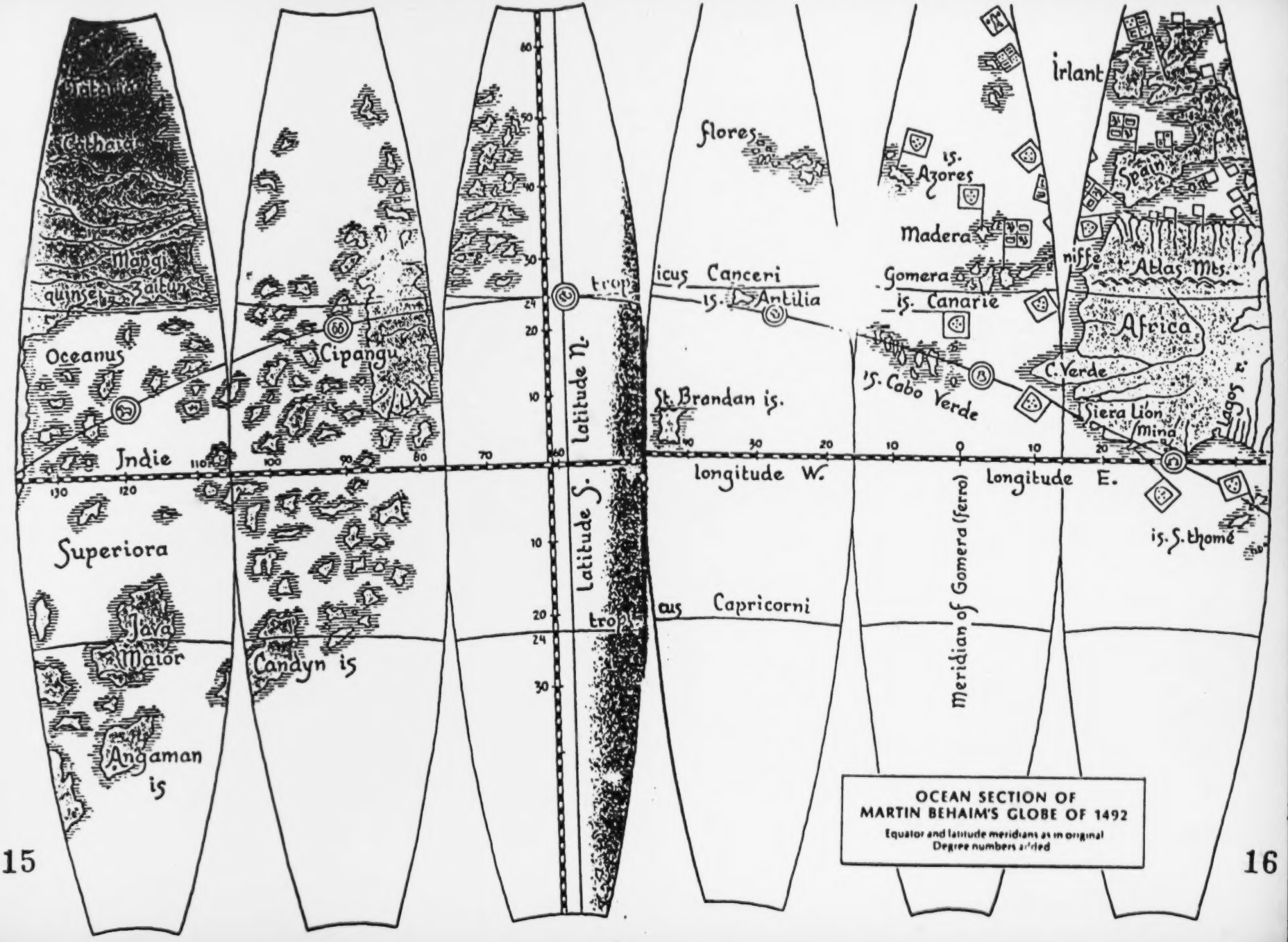
The circumference of the globe can be computed by multiplying the length of a degree by 360. But how long is a degree? This problem puzzled Columbus and his contemporaries. Columbus decided that the degree measured 40 nautical miles. In actuality, it is 60 nautical miles. (Though the distance of a nautical mile is in dispute, the National Geographic Society accepts 4,284 feet for a Columbian mile.) Columbus also decided that the trip from the Canary Islands to Japan required him to cross only 60 degrees of ocean.

Using the above data, students will complete the following exercise using a current world map with lines of latitude or longitude. An atlas can also be used.

Using Columbus's figures, calculate the circumference of the world at the Equator. Also find these distances:

a. Spain to Japan
b. Spain to China
c. Spain to the Azores
d. Spain to the Canary Islands
e. Genoa to Madrid
f. Lisbon to Iceland
g. Spain to Cuba
h. Lisbon to the Gulf of Guinea

Compare Columbus's data with the actuality of distances. Considering the data of Columbus, Behaim and Toscanelli, how could these all have been so far wrong in the calculations? What could have accounted for these discrepancies?



OCEAN SECTION OF MARTIN BEHAIM'S GLOBE OF 1492

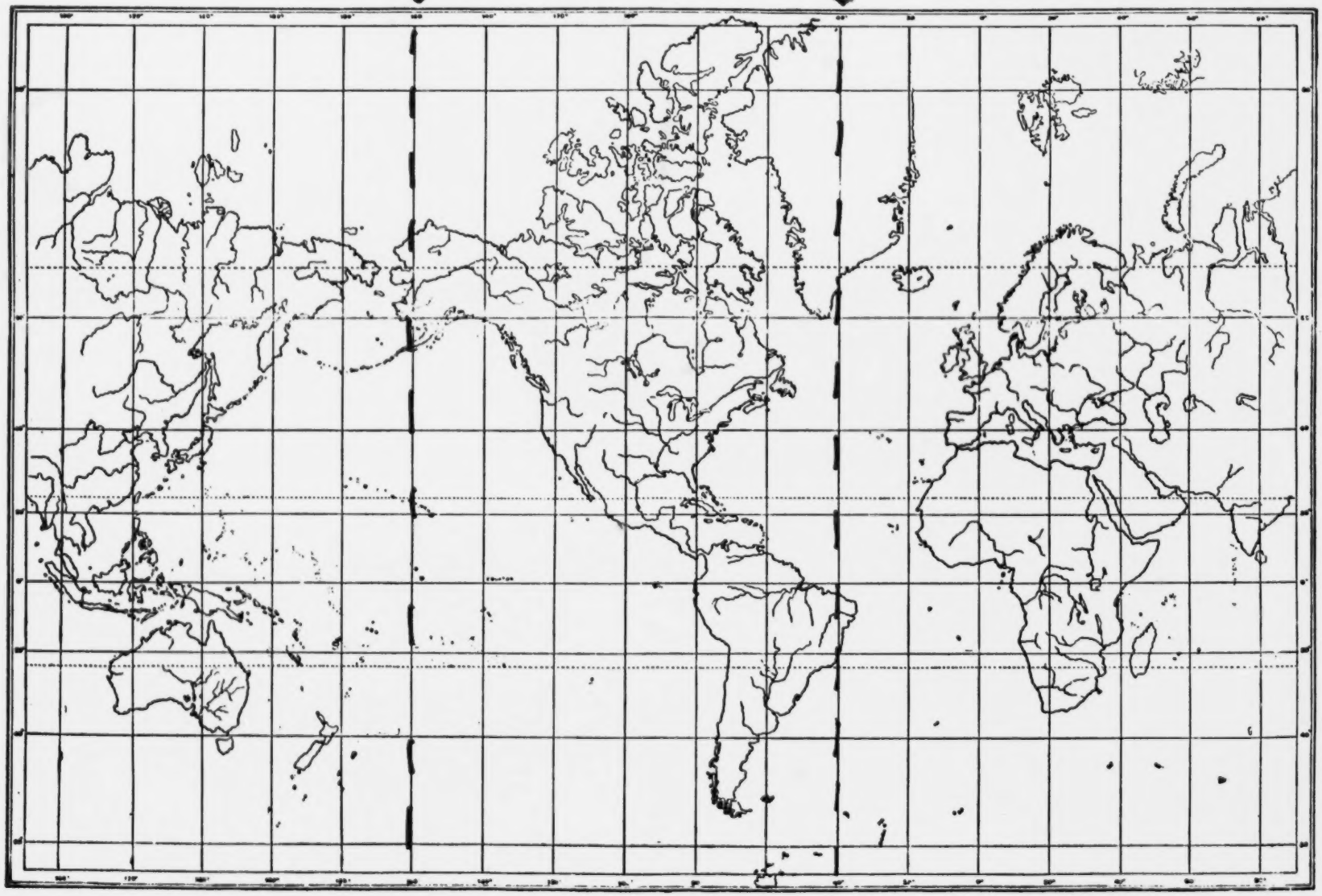
Equator and latitude meridians as in original
Degree numbers added

15

16

To See The World As Columbus,

Fold Map on Dotted Lines



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WHO DISCOVERED AMERICA?

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Overview

This lesson plan is designed primarily for use with secondary U.S. history students, although world history teachers might wish to use it. It involves both group and individual work and asks students to read and interpret several items of historical knowledge. The reading level of the "Evidence Cards" varies so that teachers can meet individual student needs. The time required for the lesson, including teacher-led debriefing and discussion, is approximately one class period.

Objectives

1. Students will learn that there are many answers to the question "Who Discovered America?"

2. Students will read, analyze, and evaluate a variety of historical information for meaning and authenticity.

3. Students will work together to develop an American Discovery Time Line using factual and legendary information.

4. Students will discuss the meaning of the word "discover" and why the Columbus voyage is considered the "real" discovery.

Materials

1. A globe and/or good world maps with sufficient detail to identify most (if not all) of the geographical places included in the Evidence Cards.

2. A set of Discovery Evidence Cards for each group.

3. A Discovery Time Line model.

4. A Discovery Group Discussion Guide.

Procedures

1. Divide the class into groups of 4-6 each.

2. Distribute a set of Discovery Evidence Cards, a Discovery Time Line, and the appropriate number of

Discovery Group Discussion Guides to each group. There are 11 Evidence Cards and some are easier to read than others. If you wish, assign cards based on student abilities. Just be sure that all 11 cards are read. Each group should have a globe (preferred) or good world maps.

3. Students should read their card or cards and answer the individual questions on the discussion guide. You may have to help some groups locate some of the places listed in the cards.

4. Students should read and begin to answer the group discussion questions. Depending on your preference, you might want to appoint a chair. One of their primary tasks is to create the time line using the information on the cards. Some of the "discovery stories" are based on legend, at least one is somewhat credible, and the cards with the information about the Vikings and Columbus are historically accurate.

5. After the students have completed their group work, bring them back together as a class and review the questions. Some can be dealt with quickly; others require more thoughtful discussion. First, reconstruct the time line on the chalkboard or on a transparency.

6. The final question is the key to the lesson. The Vikings certainly were in America and the Asian wanderers preceded them. The Bristol Men probably saw part of what is now North America and the Chinese monk may have beat all of them. So why is the Columbus voyage celebrated as the "true discovery of the New World?" (At least the Vikings knew they were in a new land.) Appropriate answers would include statements about (1) the lack of historical documentation for the other discoveries; (2) the strong need in the late 1400s to find another route to the Orient in order to get around the Moslem stranglehold on European travel; (3) the desire to spread Christianity; (4) the fact that Columbus was the first of the discoverers to have the backing of a powerful nation and its rulers; and (5) more advanced communication in the Europe of the late 1400s in contrast to that of the era of the Viking settlements. By the way, when the evidence cards are correctly placed on the time line, their individual letters spell out "W-H-Y-D-I-S-C-O-V-E-R?"

Resources

Listed below are several sources that could prove useful to teachers or students. Most are readily available in college and major public libraries.

Boland, Charles M. They All Discovered America. Doubleday, New York, 1961. (Be a bit wary of this one. Boland accepts many of the legends about discoverers prior to Columbus and his claims have not been supported by prominent historians.)

Boorstin, Daniel. The Discoverers. Random House, New York, 1983.

Morison, Samuel Elliot. The Great Explorers. Oxford University Press, New York, 1978.

Quinn, David. North America From Earliest Discovery to First Settlements. Harper Colophon Books, New York, 1977. (This book is part of the New American Nation Series, edited by Henry Steele Commager and Richard Morris.)

Quinn, David. North American Discovery, circa 1000-1612. Harper and Row, New York, 1971.

WHO DISCOVERED AMERICA?
Student Discussion Guide

Individual Questions

1. Your evidence card lists several geographical places. Can you find them on the globe or map? Be ready to point them out to others in your group.

2. Your evidence card includes at least one date. If more are listed, determine which date is most important. You will be helping others in a group put each evidence card on a time line.

3. Does your evidence card seem convincing to you? Do you believe that the event or events described actually happened?

Group Questions

4. Working with your group, complete the Time Line by putting all the evidence cards in order. Remember, some contain more than one date, so be sure you use the most significant discovery date on each.

5. Take each evidence card in chronological order. The person who reads it should briefly describe the historical event and explain how it relates to the discovery of America. Tell the group if you believe that the event happened and why you believe it.

6. The entire group should discuss all of the "discoveries" described on the evidence cards and decide which were probably legends, which one may or may not have happened, and which ones are historically accurate.

7. Each group should decide who <u>really</u> discovered America. Develop an argument to support your view. Discuss why you believe Columbus receives nearly all the credit for the discovery in textbooks and national holidays.

EVIDENCE CARD-W

Nearly all historians and anthropologists agree that the first settlers of the Western Hemisphere were wanderers from Asia. Wanderers from what is today the Soviet Union probably crossed the Bering Strait (between Siberia and Alaska) as much as 40,000 years ago. At that time the world was much colder and much of the ocean was frozen into glaciers. This reduced the amount of water in the oceans and lowered the water level. A land and ice bridge connected the two hemispheres at the Bering Strait. There is archaeological evidence that the huge glacier covering much of North America did not cover the southern Alaskan coastline, which would have made it possible for the wanderers to move southward.

Other groups followed. Some came in skin boats. Others walked across when the Bering Strait was frozen in winter. Many historians think that the last wave of wanderers came between 1200 and 500 B.C., when central Asia was being devastated by the warlike Huns. They brought dogs, domesticated from the Siberian wolf, but did not bring other domestic animals such as cattle or sheep.

Find the Bering Strait on the map or globe. Can you estimate the distance between the closest points of the eastern and western hemispheres? What island chain could also have been used as a bridge or set of stepping-stones for these early wanderers?

EVIDENCE CARD-H

Around 458 A.D., a group of five Buddhist monks from China traveled north along the western coast of Asia and along the Kamchatka peninsula north of Japan. They crossed an island chain and then traveled south. They called this land Fusang. Another Chinese monk, Hui Shen, returned from a sea voyage in 499 A.D. and reported he had found a land of highly-developed culture, rich in fruit and vegetables. The people had gold, silver, and copper, but no iron.

There are no written records about either the trips of the five monks or of Hui Shen. There is evidence that a monk with a similar name lived about this time in China and that he was a traveler to far-away places such as the island of Ceylon.

Find the Kamchatka peninsula on the map or globe. Trace the route that Hui Shen would have had to follow to reach Mexico.

EVIDENCE CARD-Y

An Irish monk named Brendan or Brennain sailed west from Ireland and sighted a floating mountain of ice in about 500 A.D. The story describes a major storm and tells how Brendan had to tie his small, round boat made out of skins to the back of a whale. Later, he recruited 14 other monks and sailed west for six years. They encountered various sea monsters and eventually reached a "promised land" where they found more Irish monks. They also found fruit that ripened year round and precious stones that could be picked up off the ground. During their travels, they landed on a small barren island and lighted a fire with wood they had brought with them. The ground began to ripple and move and the monks realized they were on the back of a gigantic fish. The trip back took only a year and Brendan, then in his 90's, died soon after. He was made a saint and became the patron saint of Irish sailors. His tale was well known in medieval Europe.

EVIDENCE CARD-D

During the Middle Ages, almost all travel in Europe was by land. The Moslem Empire was at its peak and controlled Spain to the Pyrenees, the northern lands of Africa, the Middle East and lands all the way to the Indus River. They completely dominated the Mediterranean Sea and prevented any European travel on it.

Then, in the late eighth century (the late 700s A.D.), seaborne troops from the north began to swoop down on northern European settlements. These invaders were called Northmen or Norsemen and came from the Scandinavian nations of Denmark, Norway, and Sweden. They were called "Vikings," a name meaning "pirate" in their language. In the next hundred years, the Vikings raided villages all along the Baltic Sea, Scotland, northern Ireland, and even to the remote islands that we today call the Orkneys, Shetlands, and the Hebrides. They were courageous and adventurous sailors who were willing to sail into unknown waters to find other lands to plunder. They established a permanent settlement on the coast of Iceland. The Norseman (or Vikings) kept written records of their travels and adventures. They wrote and even made maps on animal skins. These records, called "sagas," were passed down to other generations.

According to one of these sagas, a Viking ship captained by a Norwegian sailor named Gunnbjorn was blown off course near Iceland in about 850-876 A.D. The ship traveled west and south and became icebound during the winter months near a land that had never been seen before. The following spring, Gunnbjorn returned to Norway with his story. Most historians believe that Gunnbjorn had spent the winter anchored off the coast of Greenland.

Find Iceland on the map or globe. Approximately how far is the eastern coast of Greenland from Iceland?

EVIDENCE CARD-I

The first European contacts with North America came by way of Greenland. Look on a map of the Northern Hemisphere. Locate Greenland. It is the largest island in the world, more than twice the size of any other island. Greenland can be viewed as a western extension of Europe or an eastern extension of North America. Norse sailors (from what we now call the Scandinavian nations of Denmark, Norway, and Sweden) sailed to and established colonies on the smaller island of Iceland in the latter half of the 10th century A.D. (the late 900s A.D.)

In about 982 A.D., a sailor named Eric the Red was accused of manslaughter and forced to leave Norway with his family to settle in Iceland. A few years later, he was expelled for more killings and forced to move to a small peninsula jutting out to the far west. And, when convicted of still more killings, he was banished from Iceland for three years. But this time, Eric decided to sail further west and try to find a land that had supposedly been sighted by a storm-driven sailor named Gunnbjorn.

After sailing only about 500 miles west, Eric found a huge island. He sailed down the east coast and up the west where he found grassy slopes and a land where game animals, birds, and fish were plentiful. However, there were no forested hills like in his native Norway. He and his family built a settlement. When his three-year banishment ended, Eric returned to Iceland and gathered settlers. He called his new discovery "Greenland," hoping the name would attract settlers. In 986 A.D., 25 ships with men, women, and domestic animals left Iceland. Only 14 ships made it to Greenland, but a permanent settlement of 450 settlers was built.

EVIDENCE CARD-S

According to the Norse or Viking sagas, a Viking sailor named Bjarni Herjolfsson set sail from Norway in the summer of 986 A.D. for Iceland. He planned to spend the winter there with his father. When he arrived, he found that his father had sold his land in Iceland and moved to a new colony called "Greenland" that had been founded by a criminal outcast named Eric the Red. Along with his men and their cargo, they set sail for Greenland, even though they had no chart or compass. They became lost in fog and sailed for several days longer than they had been told would be enough to reach Greenland. Finally, they sighted a land that was "level and covered with woods." They sailed south and found more "flat and wooded country." To the north was glacier-covered mountains. Bjarni refused to let his men stop and go ashore. He turned east again, and after four days, arrived on the southwestern tip of Greenland, the exact spot he had been searching for.

Historians and archaeologists disagree what land Bjarni Herjolfsson and his crew may have seen, but most think it was either Baffin Island or the northern coast of Newfoundland. Bjarni told his father and the other settlers in Eric the Red's colony about the land. For the next 15 years, there is no record of any other attempt to find the new land. However, there are records of Greenlanders climbing the mountains behind their settlements and seeing what may have been land or at least the type of clouds usually seen over land.

EVIDENCE CARD-C

Leif Ericksson was a Norseman or Viking. Although most of his family was from Norway, he had been born in Iceland because his father, Eric the Red, had been expelled for manslaughter. Later, when his father killed more people, he and his family had settled in Greenland where Leif grew up. In 999 A.D., Leif had visited Norway and, like many other Scandinavians, had converted to Christianity. He returned to Greenland and, with his father, planned to travel to a new land that an earlier sailor, Bjarni Herjolfsson, had seen when he had been blown off course. The written records from that time, the Norse sagas, suggest that Leif and Eric bought Bjarni's ship and made plans for the trip. Eric was to have been in charge, but his horse stumbled and threw him on the way to the ship. He took that as a bad omen and decided not to go.

In either 1000 or 1001 A.D., Leif and his crew sailed due west and within a few days came to a barren and ice-covered land. They called it "Helluland"--we now call it Baffin Island. Sailing southeast, they came to a forested and level land that they called "Markland" or "Woodland." Today, we call it Labrador. Further south, they came upon a wooded and pleasant area where they decided to spend the winter. They sailed up a small river and into a lake. They called the land "Vinland" because of the wild grapes and other berries they found there. After spending the winter there, they returned to Greenland. The site where they stayed has been unearthed. It is called L'Anse aux Meadows and is on the northeastern tip of Newfoundland.

Find Baffin Island, Labrador, and Newfoundland on the map or globe.

EVIDENCE CARD-O

Thorvald Ericksson grew up in Greenland with his brother Leif and his notorious father, Eric the Red. Eric had been expelled from both Norway and then Iceland for killing several people. Known as Norsemen or Vikings, the people who settled Greenland were expert sailors and adventurers. When Thorvald's brother Leif returned to Greenland from a long voyage to a previously-unknown land called "Vinland," Thorvald wanted to see it too. His father had died and Leif had to stay home and take care of family responsibilities. Thorvald used his brother's camp in Vinland, a site on the northeastern tip of the island of Newfoundland. They spent the summer exploring the coast and the winter in the house that Leif had built. The next summer, they had their first violent encounter with the natives, which they called Skraelings. Eight natives were killed and Thorvald received a fatal arrow wound. His men returned to Greenland.

A few years later, an Icelander named Thorfinn Karlsefni, who was married to Leif and Thorvald Ericksson's sister, Gudrid, set sail for Vinland with four ships, 160 men, several women, and many cattle. They established a settlement (probably near the same site that Leif Ericksson had built a house) about 1020 A.D. Thorfinn and Gudrid's son Schnorre was born in the next year, the first recorded birth among European settlers in the Western Hemisphere.

The settlement lasted only three years. Within a few years, relations with the natives--the Skraelings--had changed from trading to fighting. After several battles, the Viking settlers left. A final expedition led by Freydis, another sister of Leif and Thorvald, lasted only a short while.

After the year 1200, the climate of Greenland turned colder and its settlers gradually began leaving for Iceland and Norway. By the end of the 1300's, the settlements in Greenland and the little outposts in Vinland were only a memory.

Find Newfoundland on the map or globe. Trace the route from the southwestern tip of Greenland, past Baffin Island and Newfoundland, to the northeastern tip of Newfoundland. This is the route of Thorvald Ericksson and Thorfinn Karlsefni.

EVIDENCE CARD-V

In 1558 A.D., a book was published that told of the travels of two brothers named Nicolo and Antonio Zone, from Venice, Italy. According to the book, the brothers traveled to Persia near the end of the 1300s and later were shipwrecked off an island they called Frislanda. They heard of a strange western land, sailed there, and found a place called Estotiland where people could read Latin.

Many historians think that the book about the Zeno brothers was written because of rivalries between cities in Italy. Columbus was from Genoa, a rival and sometimes enemy of Venice.

EVIDENCE CARD-E

There had long been a legend in medieval Europe about an island called Brasil or Brazil. It was supposed to have been a wooded land with fantastic fishing all around it. Between 1479-1481 A.D., merchants and seamen in the seafaring English city of Bristol were experts at fishing for cod off the coast of western Iceland. Looking for more fishing areas, a ship's captain named Lloyd sailed in 1480 looking for "Brasile" but returned because of bad weather. The next year, two small ships--the Trinity and the George--set sail and were gone for 75 days. While the written evidence is not completely clear, the phrase "to serch and fynd a certaine ile callid the Isle of Brasile" is included in the report of the trip. Other than that brief scrap of paper, there is no firm evidence of the discovery. But, later in a letter to Columbus, John Day wrote that Newfoundland (officially discovered by John Cabot in 1497) had been found previously "by the Bristol men." Columbus was aware of this claim.

Find Bristol, England and Newfoundland on the map or globe.

EVIDENCE CARD-R

The following description is derived from the ship's log that Christopher Columbus kept on a voyage that began on August 3, 1492 A.D. Ferdinand and Isabela, the King and Queen of Spain, had decided to support an exploration of the western seas in an attempt to find a short route to Japan and India.

It was a clear night on October 11, 1492. The three little ships changed course a bit, pointing due west. Lookouts kept a sharp watch. The Admiral had promised a silk shirt and gold coin to the first man who sighted land. They had seen birds and driftwood for the past few days and they believed that land was near. At 10:00 p.m. that night, the Admiral himself saw light, like a small wax candle, and he was certain they were near land.

Discovery came in the early hours of the morning, with the moon high behind them. The foredeck lookout on the Pinta saw a white blur and the faint edge of the horizon. He called his captain who looked for a few seconds and then ordered a match touched to the signal cannon. It flashed and roared, rousing all the sleepers of the three ships in the quiet of that early morning on October 12, 1492. Columbus and his men had discovered America.

A MYSTERY IN HISTORY
-or-
Where in the World was Columbus?

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Overview

Detectives conclude from a few specific facts who a criminal really is. The reasoning ability of such literary sleuths as Sherlock Holmes or Jane Marple is legendary. Is it possible for two different detectives, using the same information available to them, to arrive at a completely different culprit? Theoretically, that could be so depending upon the import they put on certain evidence.

In a sense, historians are detectives as they search for Columbus's first landfall in the New World. The available evidence is Columbus's log, or at least the abstraction of that log by Bartoleme de Las Casas. In the log, descriptions of the new lands, the winds, and other events are given. However, since no latitude or longitude is given, the exact location remains a mystery.

Goals

1. To explore the log entries for Columbus's words of discovery.
2. To examine the two leading theories about the original landing site.
3. To analyze some of the reasons why Columbus's location was unknown.

Objectives

Students will be able to:

1. Explain reasons for support of the two main theories of the landfall.
2. Trace the two tracks for the landfall on a map of the Bahamas.
3. List at least three reasons that the exact location is unknown.
4. Evaluate the data for the weaknesses in the theories.

Background

Perhaps the greatest event in European/American history in the last 500 years was the founding of the New World by Columbus. But where did he find it? That question has been one of the great unsolved mysteries since that momentous day in 1492. But how would one solve it? The general tests are that one could trace the route back from Cuba using the same general bearings, one could sail that route today using the same directions as given by Columbus, and the general description and measurements of the places visited must resemble Columbus's log entries.

In this lesson, students explore the two leading landfall theories. In the 500 years since the voyage, there have been nine different islands nominated as the original San Salvador. Some of the leading contenders have been Grand Turk, Mayaguana, Cat Island, Samana, Rum Cay and Watling's Island (known as San Salvador since 1926). This lesson will compare the theories for Samana and Watling's Island, the two leading candidates in recent historiography.

The Watling's Island track is supported by historian Samuel Eliot Morison, who is considered "the" biographer of Columbus. The Samana Cay track was proposed by Gustavus Fox, Lincoln's Assistant Secretary of the Navy. Both tracks encounter problems when the log is applied as the test. The only known fact is that Columbus encountered land somewhere on October 12, 1492 (unless one uses the Gregorian calendar which adds nine days for October 21).

Procedures

Divide the class into four groups; two will defend the Fox theory, two the Morison theory. Distribute the synopses of the theories. Groups will read, analyze, and prepare defenses. The students will reconvene as a class with each group presenting the arguments for their positions.

Students must read and interpret the evidence. The use of Columbus's descriptions, as well as a map of the area for study, is recommended. Most atlases have a sufficiently-detailed map of the Caribbean.

Conclusion

1. Students will research and analyze why there is so little known about this monumental event. How can two scholars, using the same evidence, arrive at such different conclusions? Which theory has the most validity? Why?

2. Distribute the "Ten Reasons Why Historians Disagree" reading. Discuss it with the class.

For Further Study

Analyze the use of modern technology to search for the landfall by reading National Geographic (November 1986), Volume 170, No. 5. Devoted to the most recent research on Columbus's landfall, the articles use Columbus's words from the log and explain how computers were used to search for the first landing site. Which of the two theories is supported by the research? How did they arrive at their conclusions?

Articles: "Our Search for the Columbus Landfall."
"Where Columbus Found the New World" by Joseph Judge.
"The First Landfall of Columbus" by Luis Marden.

Bibliography

The Great Explorers: The European Discovery of America. Samuel Eliot Morison. (Oxford University Press: New York, 1978).

Admiral of the Ocean Sea: A Life of Christopher Columbus. Samuel Eliot Morison. (Little, Brown, and Company, Boston, 1942).

The Log of Christopher Columbus. Translation by Robert H. Fuson. (International Marine Publishing Company, Camden, Maine, 1987).

Jackdaws series. "Columbus and the Discovery of America." John Langdon-Davies, ed. (G.P. Putnam's Sons, NYC) #1.

THE CASE FOR WATLING'S ISLAND

In unraveling the mystery of Columbus's first landfall, certain descriptive passages from the log must be examined and compared to the island sites.

The chief proponent of the Watling's Island designation as San Salvador is historian-author-admiral Samuel Eliot Morison. Morison is only one of a series of supporters of this location, the first one dating back to 1793 with Juan Bautista Munoz. Watling's Island has had the most consistent support of powerful individuals over the years; they even got the name changed legally to San Salvador in 1926.

Samuel Eliot Morison contends that Columbus landed on the eastern coast of Watling's Island. He rejects the sighting of the light that Columbus recorded in the log the night before the landing. Morison blames male vanity as the reason Columbus claims to have sighted land first, that and the fact that he didn't want to pay the sailor the bonus he had promised for the first sighting.

Morison believes that if one works back from Cuba (the test for the landfall), Watling's Island is the only one to fit the description. Some discrepancies Morison discounts, such as the forests of trees described in Columbus's log are overexaggerated. Morison contends that the hardwood forests have subsequently been stripped by hurricanes and the soil depleted by growing sea cotton. He also states that the surviving trees lend support to Columbus's claim of the vast forests on the island. Columbus also noted the peninsula which could be made an island by high waves in two days. On Watling's Island, one can now wade across to a small island, separated by weather and time.

The several bodies of water described by Columbus on San Salvador are accounted for by the several salt lagoons on the island. The closest are a few hundred yards from the beach. Columbus also notes the lack of mountains; the highest hill on Watling's is just about 140 feet above sea level. The log entry also describes an abandoned natural quarry, which Morison locates at Hall's Landing, north of the landfall.

A harbor on San Salvador is described as "large enough to hold all the ships of Christendom." Morison locates this on the north end of the island at Graham's Harbor. Watling's Island is 13 miles long and six miles wide. There are coral reefs, extending around both sides of the island and around the northern cape, except for the northern third.

From Watling's Island, Morison has Columbus sail to Rum Cay (Santa Maria de la Concepcion), which he calls a six-in-one island for the high hills located there. This allows Morison to

explain the "several islands" Columbus saw from San Salvador. Although the island is about one-half the size Columbus noted, Morison explains this as a translation error of "miles" and leagues"--which is found in several instances in the log entries and translations.

On the Watling's track, Columbus's island of Fernandina would be Long Island, the north end of the island. In locating Long Island, one must look for a village anchorage, a harbor with two mouths, and an east-west coastline. Morison, at first, said the fleet didn't anchor here because the coast was too steep; he, some 20 years later, he named Burnt Ground or Simms as the anchorage. The two-mouth harbor he has located at various times at Newton Cay, Calabash Bay, Hoosie Harbour and Santa Maria Harbour, all on the west side of Long Island.

Morison claims these "fit perfectly" - due to different translations over the years. Morison is criticized because of the contradictory and ambiguous nature of his statements.

Crooked Island and Fortune Island become Columbus's Isabela. Morison puts the landfall at Bird Rock on the northwest point of Crooked Island. He has Columbus heading from Bird Rock to Roses to northern Long Island to Cape Verde and back to Roses in two days'. A superhuman accomplishment to say the least! Morison ignores these inconsistencies.

The Cape Verde fix, where the latitude and longitude are given for the first time, is corrected by Morison, as it was given by Columbus. Using the directions from Bird Rock, Morison accounts for the difference in miles, not leagues. Questions arise here because of the "dead reckoning" skills of Columbus. Could he have been so far wrong? Morison thinks so.

Morison, considered the official biographer of Christopher Columbus, surely knows more than any ordinary person of the life of the man. But does he indeed know where the first landfall of Columbus was?

THE CASE FOR SAMANA CAY

The best case supporting Samana Cay as the original San Salvador of Columbus is made by Gustavus Fox, Assistant Secretary of the Navy under Abraham Lincoln. His study was done for the US Coast and Geodetic Survey, published in 1882. He was the first in a series of supporters of Samana Cay as the first landfall in the New World. Fox studied the Navarrete transcription of the log, visiting the Bahamas to search for the few outstanding characteristics Columbus noted. At the original San Salvador, Columbus described a large, flat island, having no mountains but several bodies of water and a large lagoon in the middle of the island. Fox found all of these on Samana Cay.

Samana Cay is a small island of 8.6 square miles, lying east and west. The north shore is surrounded by a coral reef stretching a half mile from land; on the south shore, the coral reef lies off about half of the island from its western tip. However, Fox found an abundance of water with a large lagoon in the middle of the island. During the rainy season when Columbus would have been in the Bahamas, Fox felt there would have been many small ponds in the lowlands; these ponds would later evaporate. There are no mountains on Samana Cay, only a series of low hills, no more than 100 feet high.

There is also a white bluff, which Fox believed Columbus actually sighted as the first land on the night before the landing. Columbus noted seeing the land by a bright moon, confirmed by the Naval Observatory, shining in the Bahamas at the time of the first sighting. It is at this point that Fox believed that the shining light seen by Columbus was actually the lantern of night-fishing natives. The final distinction San Salvador had was as a peninsula which could have been cut into an island in two days. Fox also found this landform on Samana Cay where the east end of the cay has already been severed by wave erosion.

When Columbus left San Salvador, he saw before him several islands. Fox judged that Columbus was seeing hills on Plana Cays, Crooked, and Acklin, which would have appeared as islands from a distance. Fox considered Crooked and Acklin to be one island, Crooked, which was to be Santa Maria de la Concepcion in his theory.

Santa Maria, according to Columbus, measured nearly 16 miles on the north-south sides and nearly 32 miles long on the east-west sides. Crooked Island, according to Fox, measured 13 miles north-south and 29 miles east by south, west by north. Fox accounted for the slight differences by reminding readers that Columbus had no exact navigational or measuring instruments.

Fox also noted that this second island is the only island Columbus explored for which he gave dimensions - and that Crooked Island is the only island in the Bahamian group which meets this description. Fox felt this was pretty conclusive evidence for his theory, despite some objections that the log described the island with the coast running north and south toward San Salvador when Crooked runs east and west from Samana Cay. Fox attributed this to the fact that this log entry was made in retrospect and that Columbus could only have noted this after leaving Crooked, for this island is not visible from Samana Cay. Fox claimed this was another translation error.

This second island that Columbus saw caused many problems for researchers. Fox countered the critics by claiming errors in translation in archaic expressions which have led to the confusion. Fox contended that there is no problem because Crooked so closely fits the dimensions given by Columbus.

Fox's next island was Long Island, Columbus's Fernandina. This island was characterized by a village anchorage, a large harbor with two entrances and an east-west coastline. Fox claimed the anchorage was the village of Adams Hole; the two-entranced harbor was Little Harbor; and the island has an east-west coastline with 10.5 nautical miles. A problem of translation uses "leagues" and "miles" interchangeably. Fox used his interpretation to agree with Columbus's dimensions.

Fortune Island would be Columbus's Isabela in Fox's theory. Columbus noted in the journal that the third island was west of the second, the fourth lay east of the third. This would make the second island adjacent to the fourth - as - Fox noted that they appear on the chart. However, Columbus would not have known this since there were no landmarks or any way to recognize his location on the sea. Out of sight of land, there was no way for Columbus to know exactly where he was or where he was in relation to other places he had been.

After leaving Isabela, Columbus encountered a group of "seven or eight islands, all extending from north to south; distant from them five leagues." These Columbus called the Sand Islands, covering 15.9 nautical miles. Fox confirmed that a group of cays and islands lie nearly 60 miles north-northeast of Cuba, extending about 21 miles. The eight principal islands have become known as the "Columbus Bank." Fox claimed that the shallow water and the string of islands as described by Columbus exist nowhere else in the Bahamas area. From here, it is definite Columbus voyaged to Cuba.

Fox's theory relies heavily upon geographical locations and description from the log to support Samana Cay as the original landfall. He traced the progression of Columbus through the islands, relying primarily upon size, distance, shape and

position. Fox's theory has gained much support over the years with further research corroborating his claims. Did he indeed know where the first landfall of Columbus was?

Ten Reasons Why Historians Disagree

With such a momentous event as the first landfall in the New World, why don't we know where Columbus first sighted land? A few of the reasons are examined.

1. Columbus sailed without astronomical checks, relying solely upon the compass, a rude instrument of the time. He was a "dead reckoning" sailor who claimed he never lost a ship (according to him, the Santa Maria was grounded - not lost).

2. There was no way to measure a ship's speed through the water. The measurements of distance given by Columbus were disputed because he underestimated the distance by keeping two sets of distance, one he considered actual measure and one given to his men so as not to frighten them in how far from home they were. An interesting note is that Columbus's "false" data for his crew is actually closer to the true measure of distance.

3. Distance creates another problem. Columbus might have been referring to a Spanish marine league (3.18 nautical miles) or an Iberian sea league (2.82 nautical miles). Even the distance in a nautical mile is contested with the National Geographic Society accepting 4284 feet in a Columbian mile.

4. No adjustment was made for winds, currents, or drift speed. Such factors as the size and shape of a ship's hull, the direction and strength of the winds, and the currents are all influencing factors in determining Columbus's final destination. He could not simply have sailed due west without being influenced by these factors. Estimates are that there was at least a 9% error, which means that Columbus sailed at least nine miles farther in every 100 miles sailed.

5. Columbus gives few dimensions or coordinates of places he explored. Cartography and navigation tools were in their infancy. He really did not know where he was. With the exception of the Cape Verde fix where the two bearings given cross for the first time, no other place can really be located. The Cape Verde fix is one of the tests used in backtracking to locate Columbus's first landfall.

6. If using the Julian calendar, Columbus sighted land on October 12, 1492, our traditional Columbus Day. However the Gregorian calendar, used until a Papal Bull in 1582, makes Columbus Day nine days later on October 21. Which is the real Columbus Day?

7. Columbus was exploring an unknown land, one without any outstanding features or characteristics. As he described

the land he encountered, the descriptions are very general; and surely some of what he thought were outstanding descriptive features have changed in 500 years. (For example, on San Salvador, Columbus describes a peninsula which could be cut off to form an island in one day. Yet neither Samana Cay nor Watling's Island, the two chief contenders for San Salvador distinction, has a peninsula. Samana Cay contains a small island at the end of the larger one.)

8. The ship log of Columbus, considered to be "the" source for knowledge of this voyage of exploration, was translated by Bartolome de las Casas. Since the original voyage and translation, the log has undergone several other interpretations. Certain words and phrases have changed in meaning over the years. Some words, no longer in common usage, have been interpreted differently as time has passed.

9. There was no method to determine longitude at sea. No landmarks are available; no land in sight marks the path. Though the compass and quadrant were in existence, Columbus seldom consulted them as his sailing experience guided him to the New World.

10. It will not be for at least 150 years after Columbus that pilot charts of the oceans will indicate currents and probable winds. Surely ocean currents and winds cannot have changed greatly in that short amount of time. Yet Columbus did not realize how far off in his calculations he really was.

IS IT ANY WONDER WE DO NOT KNOW WHERE THE FIRST LANDFALL WAS?

CANAL ZONE
ATLANTIC
OCEAN
WEST INDIES
BAHAMA
ISLANDS (UK)
CUBA
HAITI
DOMINICAN REP.
PUERTO RICO
JAMAICA
HISPANIOLA
ANTILLES
LEEWARD
ISLANDS
WINDWARD
ISLANDS
CARIBBEAN SEA
MEXICO
NICARAGUA
Gulf of Honduras
Gulf of Darien
Yucatan Channel
Isla de Pinos
Great Inagua
Grand Cayman
Caicos Is. (UK)
Turks Is. (UK)
Virgin Is. (US)
St Croix (US)
Dominica (UK)
Guadeloupe (Fr.)
Martinique (Fr.)
St Lucia
St Vincent
Barbados
Trinidad
Tobago
Margarita
Curacao (Neth.)
Aruba (Neth.)
Bonaire (Neth.)
Los Roques
Los Hermanos
Los Frailes
Los Testigos
Los Monjes
Blanquilla
Tortuga
Gulf of Venezuela
Maracaibo
Valencia
Caracas
Barquisimeto
Barranquilla
Cartagena
Sierra de Aboyson
Sierra de Perija
Andes
Llanos
Orinoco
Delta
Cayos de Albuquerque
Cayos Miskitos
Cayos Vivorillos
Cayos Zapatillas
Cayos Media Luna
Cayos Cochinos
Cayos de Sal
Cayos de Roncador
Cayos de Serrana
Cayos de Quitasueno
Cayos de Serranilla
Cayos de Bajo Nuevo
Cayos de Pedro
Cayos de Portland
Cayos de Morant
Cayos de Navassa
Cayos de Mosquitos
Cayos de Providencia
Cayos de Santa Catalina
Cayos de San Andres

COLUMBUS AND THE NEW WORLD: THROUGH EUROPEAN EYES

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Overview

Ethnocentrism can be simply defined as "the belief that one's particular group is superior." Essentially meaning "group-centered," that particular group may be a homeroom, a school, a club, a nation, or any such group with which one identifies. Ethnocentrism may create a sense of pride and belonging, but it may also create racial conflict, exploitation or death due to the stereotype of seeing all members of a group as the same.

In our history, we have seen such examples of ethnocentrism as the following:

"No Irish need apply" (signs outside factories, late 1800s).

"Separate but equal" facilities are constitutional (1896 Supreme Court decision allowing separation of blacks from whites on trains).

"The only good Indian is a dead Indian" (frontier saying, 1800s).

"Rum, Romanism, and Rebellion!" (said of the Democratic party as the party opposing prohibition of alcohol, composed of Catholics, and responsible for the Civil War).

"Can you type?" (most frequently asked question of female college graduates during employment interviews 1900s).

Similar stereotypes can easily be found. The students will examine documents related to Columbus to see historically the phenomena of ethnocentrism. By becoming aware of the pervasive nature of ethnocentrism, the students will recognize the inhibitions placed upon human beings by such groupings.

Preview of Main Points

The lesson focuses upon the concept of ethnocentrism by examining the words of Christopher Columbus as he encountered the natives of the New World. These "Indians," as Columbus mistakenly named them, are described in his log. Students will analyze the log entries to see how he and the other Europeans viewed these "Indians."

Goals

1. To increase the students' awareness of ethnocentrism by focusing on the entries in Columbus's log.

2. To understand the concept of ethnocentrism from a historical perspective.

Objectives

Students should be able to:

1. Identify three examples of ethnocentrism from Columbus's log.

2. Explain two instances from Columbus's log where the views of the Europeans reflect negatively toward the natives.

3. Compare Columbus's views to those heard today toward "groups" of people.

4. Analyze the views expressed by Columbus for the literal message (e.g., "ungodly"; "naked and unkempt"; "noble savage"). What is he implying about both the natives and the Europeans?

Procedures

Remind students of the definition of "Ethnocentrism" as they work through the lesson. Webster's Third International Dictionary defines "ethnocentrism" as "a habitual disposition to judge foreign peoples or groups by the standards and practices of one's own culture or ethnic group; a tendency toward viewing alien cultures with disfavor and a resulting sense of inherent superiority."

Questions for Discussion

1. Cite Columbus's log as he encounters the natives. What does he say about the natives? How does he describe them? What does this suggest about his views and the European views toward the natives?
   The log entries for October 12-13 and November 6 are included. (For further reference, see log entries for November 4-5, November 11, and December 21.)

2. Why does Columbus find it difficult to accept the fact that the natives escaped from the ship when he was going to take them to Spain? Why do the natives escape? Speculate whether Columbus would have been more likely to understand the escape if the captives had been white. Why/why not?
Included is the log entry for October 16.

3. What does Columbus say about the native women? How is this reflective of the social attitudes of the time? Is this attitude ethnocentric? Why/why not?
The log entry for November 11 is included. (For further reference, see log entries for December 12 and December 21.)

4. How is Columbus's log reflective of European attitudes (e.g., "God and country"; "white supremacy")? Are there other themes which can emerge from the words of Columbus?
The log entries for October 12-13 and November 6 are included. (For further reference, see log entries for November 4-5, November 11, and November 21.)

5. Analyze Columbus's entry in which he charged the crewmen remaining at La Navidad to accomplish certain tasks while he was gone. Are there any ethnocentric statements? For what reasons does he make these specific charges to the men?
The log entry for January 2 is included.

6. Is ethnocentrism present today? If so, where/when is it seen? A viewing of newscasts should lend evidence here. Can ethnocentrism be good? Or bad? How? Give examples.

For Further Study

Discuss Question 6. Research the practice of apartheid in South Africa. How/why did the practice develop? What are the restrictions placed on blacks? What are the punishments for violating the laws? Predict the future of South Africa, based upon the research.

Question: Are we being ethnocentric when we judge the practice of apartheid?

From the Log of Columbus
Friday, 12 October 1492
(Log entry for 12 October is combined with that of 11 October.)

At dawn we saw naked people, and I went ashore in the ship's boat, armed, followed by Martin Alonso Pinzon, captain of the Pinta, and his brother, Vincente Yanez Pinzon, captain of the Nina. I unfurled the royal banner and the captains brought the flags which displayed a large green cross with the letters F and Y at the left and right side of the cross. Over each letter was the appropriate crown of that Sovereign. These flags were carried as a standard on all of the ships. After a prayer of thanksgiving I ordered the captains of the Pinta and Nina, together with Rodrigo de Escobedo (secretary of the fleet), and Rodrigo Sanchez of Segovia (comptroller of the fleet) to bear faith and witness that I was taking possession of this island for the King and Queen. I made all the necessary declarations and had these testimonies carefully written down by the secretary. In addition to those named above, the entire company of the fleet bore witness to this act. To this island I gave the name San Salvador, in honor of our Blessed Lord.

No sooner had we concluded the formalities of taking possession of the island than people began to come to the beach, all as naked as their mothers bore them, and the women also, although I did not see more than one very young girl. All those that I saw were young people, none of whom was over 30 years old. They are very well-built people, with handsome bodies and very fine faces, though their appearance is marred somewhat by very broad heads and foreheads, more so than I have ever seen in any other race. Their eyes are large and very pretty, and their skin is the color of Canary Islanders or of sunburned peasants, not at all black, as would be expected because we are on east-west line with Hierro in the Canaries. These are tall people and their legs, with no exceptions, are quite straight, and none of them has a paunch. They are, in fact, well proportioned. Their hair is not kinky, but straight, and coarse like horsehair. They wear it short over the eyebrows, but they have a long hank in the back that they never cut. Many of the natives paint their faces; others paint their whole bodies; some, only the eyes or nose. Some are painted black, some white, some red; others are of different colors.

13 October 1492

I cannot get over the fact of how docile these people are. They have so little to give but will give it all for whatever we give them, if only broken pieces of glass and crockery. One seaman gave three Portuguese ceitis (not even worth a penny!) for about 25 pounds of spun cotton. I probably should have forbidden this exchange, but I wanted to take the cotton to Your Highnesses, and it seems to be in abundance. I think the cotton is grown on San Salvador, but I cannot say for sure because I

have not been here that long. Also, the gold they wear hanging from their noses comes from here, but in order not to lose time I want to go see if I can find the island of Japan.

Thursday, November 6, 1492

The Spaniards said that the Indians received them with great solemnity, according to Indian custom, and all the men and women came to see them and lodged them in the best houses. The Indians touched them and kissed their hands and feet in wonderment, believing that we Spaniards came from Heaven, and so my men led them to understand. The Indians gave them to eat what they had.

* * * * * * * *

Cite Columbus's log as he encounters the natives. What does he say about the natives? How does he describe them? What does this suggest as to his views and the European views toward the natives?

From Columbus' Log
Tuesday, 16 October 1492

At daybreak I went ashore in the small boat. People met us on the beach. There were many people, and they went naked and in the same condition as those of San Salvador. They let us go anywhere we desired and gave us anything we asked.

I decided not to linger very long at Santa Maria de la Concepcion, for I saw that there was no gold there. I departed the island for the ship after a two hours' stay. Just as I was preparing to board the ship, a big dugout came alongside the Nina, and one of the men from San Salvador jumped overboard and escaped in it. This is the second such incident, for in the middle of last night another man leaped into the sea and escaped by dugout. Some of the men went after the boat last night, but there was no way they could catch up to it. Those boats go very swiftly.

This morning some men of my company tried to catch the second dugout, but again, it outran them. They found it abandoned on the beach, and the men in it fled like chickens.

* * * * * * * * *

Why does Columbus find it difficult to accept the fact that the natives escaped from the ship when he was going to take them to Spain? Why do the natives escape? Speculate whether Columbus would have been more likely to understand the escape if the captives had been white. Why/why not?

Sunday, 11 November 1492

I shall depart tomorrow to the SE for Bohio, which is also called Babeque by some here. I do not know for certain whether one is a province of the other or not, but all these people indicate by signs that there is an abundance of gold, pearls, and spices to the east.

It appears to me that it would be well to take some of these people dwelling by this river to the Sovereigns, in order that they might learn our language and we might learn what there is in this country. Upon return they may speak the language of the Christians and take our customs and Faith to their people. I see and know that these people have no religion whatever, nor are they idolators, but rather, they are very meek and know no evil. They do not kill or capture others and are without weapons. They are so timid that a hundred of them flee from one of us, even if we are merely teasing. They are very trusting; they believe that there is a God in Heaven, and they firmly believe that we come from Heaven. They learn very quickly any prayer we tell them to say, and they make the sign of the cross. Therefore, Your Highnesses must resolve to make them Christians. I believe that if this effort commences, in a short time a multitude of peoples will be converted to our Holy Faith, and Spain will acquire great domains and riches and all of their villages. Beyond doubt there is a very great amount of gold in this country. These Indians I am bringing say, not without cause, that there are places in these islands where they dig gold and wear it around the neck, in the ears, and on the arms and the legs--and these are very heavy bracelets. Also, there are precious stones and pearls, and an infinite quantity of spices.

Today there came to the side of a ship a canoe with six youths in it, and five came aboard. These I ordered held and am bringing them with me. Afterwards I sent some of my men to a house west of the river, and they brought seven women, small and large, and three children. They did this so that the men I had taken would conduct themselves better in Spain than they might have otherwise, because of having women from their own country there with them.

* * * * * * * *

What does Columbus say about the native women? How is this reflective of the social attitudes of the time? Is this attitude ethnocentric? Why/why not?

Wednesday, 2 January 1493

I left on this Isla Espanola, which the Indians call Bohio, 39 men in the fortress, under the command of three officers, all of whom are very friendly with King Guacanagari.

I have left with them all the merchandise which the Sovereigns had ordered purchased for trading, of which there is a large quantity. With this they may trade and barter for gold, together with everything the grounded ship carried. I also left them sufficient biscuits for a year and wine and much artillery. I also left the ship's boat, since most of them are sailors, so they can go find the gold mine when they see that the time is favorable. In this manner, when I return, I might find a lot of gold waiting and a place to establish a settlement, for this harbor is not to my liking. Since the gold that is brought here comes from the east, the more they went to the east the closer to Spain they would be. I also left seeds for sowing, and I left my officers, including the secretary and the master-at-arms, and among the others a ship's carpenter, a caulker, a good gunner who knows a great deal about machines, a caskmaker, a physician, and a tailor. All these men are seamen.

Many times I charged Diego de Arana, Pedro Gutierrez, and Rodrigo de Escobedo to see that everything was well ruled and governed for the service of God and Your Highnesses. I gathered my men together, the ones I was leaving, and addressed them. First, I charged them to consider the great blessings that God has bestowed upon me and upon all of them up until now, and the benefits he has offered them, for which they must always give Him endless thanks and dedicate themselves to His goodness and mercy, taking care not to offend Him and placing all their hope in Him. They must pray to Him for my return, which, with His aid, I promised them would be as soon as possible--which, I trust to God, would please everyone. Second, I begged them and charged them and ordered them, on the part of Your Highnesses, to obey their Captain as myself, as I am confident of his merit and loyalty. Third, they should greatly respect King Guacanagari and his chiefs and principal men, or nitaynos, and other inferior chiefs. And they should avoid as they would death annoying or tormenting the Indians, bearing in mind how much they owe these people, and why it is necessary to keep them content, since they are remaining in Indian land and under Indian dominion. They should strive, by their honest and gentle speech, to gain the good will of the Indians, keeping their friendship and love, so that our relationship with them will be as friendly and pleasant, and more so, when I return. Fourth, I ordered them and begged them earnestly to do no injury or use any force toward any Indian--man or woman--nor take from them anything against their will. Especially, they should be on guard and avoid doing injury or using violence toward the women, by which they would cause scandal and set a bad example for the Indians, and expose our own infamy, we whom the Indians are certain come from Heaven. Fifth, I charged them not to scatter themselves or go inland, but to

stay together until I return, and most of all, not to leave the land and dominion of that King who loves them so much and has been so good and merciful to them. Sixth, I encouraged them to suffer their solitude, which is only a little less than exile, although they willingly have chosen it. Seventh, I charged them that, when they saw it was fitting, to beg the King to send some Indians with them in canoes, and to take the ship's boat along the coast to see if they could discover the mines of gold, for it seems to me that the gold comes from the east. Also, they should look for a good place to build a village because I am not pleased with this harbor. Further, if they find any gold they can barter for, they should do so, discreetly, so that when I return I shall find a great quantity of it. Eighth and last, I promised them that I would petition the Sovereigns to grant them special favors, which they truly merit, and which they will see fulfilled when they are rewarded by the Sovereigns and, with the favor of God, by me when I return.

* * * * * * * *

Analyze Columbus's entry in which he charged the crewmen remaining at La Navidad to accomplish certain tasks while he was gone. Are there are ethnocentric statements? For what reasons does he make these specific charges to the men?

THE ECOLOGICAL CONSEQUENCES OF 1492

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Preview of Main Points

Christopher Columbus crossed the Atlantic in 1492 and opened a period of massive exchange between the Old and New Worlds. The impact of his voyages on trade, religion, war and literature has been immense. But his greatest impact, argues Alfred W. Crosby, a social historian at the University of Texas, has been the one to which we have paid least attention--his ecological impact. This lesson focuses on the ecological impact for North America of the linking of the Old and New Worlds that began with Columbus's voyages.

Students will begin by comparing the natural characteristics of the Old and New Worlds as they existed before 1492. They will then examine the "invasion" of North America by the collection of life forms that Europeans and Africans brought with them, both intentionally and unintentionally. Students will explore both what was brought and the consequences in physical and human terms.

Connection to Textbooks

All U.S. history textbooks consider the voyages of Columbus. When the consequences of these voyages are considered, attention is typically given to economic, cultural, and social effects. This lesson is intended to enhance textbook coverage by focusing on the ecological consequences of his voyages. Crosby argues that from the twelfth day of October, 1492, the Old and New Worlds, "which were so very different began . . . to become alike. That trend towards biological homogeneity is one of the most important aspects of the history of life on this planet."

Objectives

Students will be able to:

1. Describe differences between the biological environment of the Old and New Worlds that existed before 1492.

2. Realize that major ecological changes occurred in North America as the result of movement of people bringing plants, animals, and diseases from the Old World to the New.

3. Identify life forms that were part of the invasion of North America from the Old World.

4. Describe the physical and human consequences, for North America, of the ecological exchanges that took place between the Old and New Worlds.

5. Speculate about the historical significance of the Columbian exchanges.

Procedures

Opening the Lesson

1. Explain that this lesson introduces students to the ecological consequences of Columbus's voyages to the New World. Point out that when we think about the impact of the voyages we typically consider only the cultural, social, and economic effects. But there is a social historian, Alfred Crosby, who argues that the ecological consequences are even more significant.

2. Begin by writing the following statement on the chalkboard. It was made by Crosby, a professor of social history at the University of Texas.

   "On the twelfth day of October 1492 . . . the two worlds . . . were reunited, and . . . began on that day to become alike. That trend toward biological homogeneity is one of the most important aspects of the history of life on the planet since the retreat of continental glaciers."

3. Point out to students that in this lesson they will be examining some of the evidence presented by Crosby that led him to make this statement.

Developing the Lesson

4. Have students read the "Introduction" section of the handout.

5. As a class, identify differences between the Old and New Worlds that existed when Europeans first reached North America. Write these on the chalkboard.

6. Ask students to think about the statement that appears at the end of the Introduction concerning differences in the ecological environments of England and North America. Ask them "Do you agree that the presence or absence of the horse and smallpox can be more significant than the presence or absence of the wheel, gunpowder or the printing press? Why?" Accept all reasonable answers. Point out that the next section of the reading will expand this statement.

7. Next have students read the "After 1492" section of the handout.

8. Remind students that, as the handout indicates, the plants, animals and diseases that invaded North America were brought here by people. Sometimes these life forms were intentionally moved to the New World, often their movement was not intentional.

9. Ask students to identify some of the life forms, described in the reading, that were part of the invasion of North America from the Old World. List these on the chalkboard.

10. Ask students to describe some of the consequences, both physical and human, that resulted from the invasion of Old World plants, animals and diseases. (They might answer: that the invasion provided the Old World humans with an environment in which they could thrive; provided new sources of food and power to the Amerindians, for example horses for the Sioux; but the diseases nearly destroyed the Amerindians.)

Concluding the Lesson

11. Review what students learned in this lesson: That for millions of years the Old and New Worlds developed separately and distinctly. That beginning with Columbus, the two worlds started to become more alike, mainly because North America became more like the Old World, ecologically. Point out that very few life forms moved from North America to the Old World.

12. Next, indicate that there are several reasons to explain why Old World plants, animals and disease were so successful in North America:

One, Old World plants, animals, and diseases were often "weeds." They could thrive where the environment had been disrupted. For instance, when fire swept through the original vegetation of the Southeastern United States, white clover took over faster than any native plant. When Europeans and Africans drove off native carnivores of the same region with musket and poison, the chief beneficiaries were the wild pigs, cattle, and horses. When hunger and general stress wore down the resistance of the Amerindians, the infections that took them the rest of the way to their graves were not American, but the "hectic fevers" of the Old World, respiratory diseases like imported varieties of tuberculosis, whooping cough, and influenza.

Two, the Old World plants and animals were tough. For instance, wild Spanish cattle, whose ancestors had survived hundreds of generations being trailed by lions and wolves, found American carnivores not pleasant but tolerable companions. The wild longhorn could outfight or outrun or out-think or certainly out-reproduce any enemy in South Texas, with the sole exception of humans.

Three, diseases like smallpox, malaria, influenza, measles, rinderpest, and distemper, first evolved in the special conditions of Old World civilization, with its intermingling crowds of humans and other creatures. Such conditions were very rarely common outside the Old World, and so the Americas lacked many of the Old World diseases or their equivalents. They, for instance, had nothing like the Old World's smallpox.

Four, the invading plants and animals were supportive organisms. The invading livestock destroyed the native American grasses, opening the way for European grasses, which in their turn provided durable forage for the livestock. The Europeans and Africans, meanwhile, did all they could to kill off the cougars and wolves, who would otherwise have limited the number of the livestock.

13. To end the lesson, return to the Crosby quotation used in the opening. Ask students whether, based on what they have learned, they would agree or disagree with Crosby's statement.

Suggestions for Additional Readings

Crosby, Alfred W., The Columbian Exchange: Biological and Cultural Consequences of 1492 (Westport, Conn.: Greenwood Press, 1972).

----------, Ecological Imperialism: The Biological Expansion of Europe, 900-1900 (Cambridge: Cambridge University Press, 1986).

Thornton, Russell, American Indian Holocaust and Survival, a Population History since 1492 (Norman: University of Oklahoma Press, 1987.)

READING: THE ECOLOGICAL CONSEQUENCES OF 1492

Introduction

When Europeans first touched the eastern shores of North America, the animal and plant life was significantly different from their homelands. Said Peter Kalm, a European naturalist, fresh off the boat in Philadelphia in 1748:

> I found that I was now come into a new world. Whenever I looked to the ground I found everywhere such plants as I had never seen before. When I saw a tree, I was forced to stop and ask those who accompanied me, how it was called . . .

There were none of the Old World crops, no wheat or barley or turnips or peas, and few of the grasses common in European grasslands. There were few species of pine and no domesticated horses, cattle, sheep, goats, nor house cats; nor any of the Old World's semi-domesticated rats, mice, house sparrows, starlings, or honey bees. Except for the dog, the Amerindians (American Indians) of this part of North America had none of the animals and only a few of the pests, body lice, for instance, associated with the Old World's dense populations. Nor did they have many of the diseases associated of the Old World. They did not live in a germless world - there were native American diseases - but they did not suffer from smallpox, measles, chickenpox, influenza, malaria, yellow fever, diphtheria, whooping cough, typhoid fever, scarlet fever, amoebic dysentery, and several other maladies in circulation in the Old World in 1492.

For millions of years the animal and plant life of the Old and New Worlds had developed independently and differently. They were distinctive until the past few centuries. Thus, the ecological environment of the England of Captain John Smith included horses and smallpox viruses. The environment of the North America of Pocahontas did not. Such differences can be more significant than the presence or absence of the wheel, gunpowder or the printing press.

After 1492

In 1492, the takeover of North America by large numbers of Europeans and Africans began. Through the movement of these people--explorers, colonists, indentured servants and slaves--a collection of plants, animals and diseases were brought to the New World, both intentionally and unintentionally.

Plants. In 1638 and 1663, John Josselyn visited New England and created a list "Of Such Plants as Have Sprung Up Since the English Planted and Kept Cattle in New England." The list included dandelions, shepherd's purse, groundsel, sow thistle,

chickweed, etc. Amerindians named one of these, plantain, the "Englishman's Foot," because they believed that it would grow only where the English "have trodden, and was never known before the English came into this country."

The champions of the Old World weeds in North America were white clover and what we call Kentucky blue grass. Mixed together, these were known as English grass in colonial times. They spread widely in the colonies from Nova Scotia to the Carolinas, and when Daniel Boone and his fellow pioneers topped the Appalachians in the last decades of the eighteenth century and descended into the valleys beyond, they found the two waiting for them in Kentucky and Tennessee. The plants had probably entered the west with the French and possibly the Spanish in the late seventeenth and eighteenth centuries. White clover and Kentucky blue grass moved west with the domesticated animals, who destroyed the indigenous plants and carried the seeds of the invading clover and grass on their hides and in their bowels.

In January of 1832 Lewis D. de Sheinitz told the Lyceum of Natural History of New York that the worst weeds in the United States were foreigners, and provided a list of 137 of them. What he meant by the worst were, simply put, the most successful at healing over the tears in the ground cover made by immigrant farmers and their livestock.

On the other hand, some very important plants traveled east from the Americas to Europe. Potatoes and tomatoes quickly transformed the diet of Europeans. Tobacco became a major commodity and corn was soon the primary food for livestock.

Animals. For almost every purpose - for meat, milk, leather, fiber, power, speed, and even manure - the European domesticated animals were superior to those few species domesticated by Amerindians of North America. The only domesticated animals of the native people of North America were the dog, nearly everywhere, and the turkey in the southwest. The Europeans and Africans disembarked with horses, cattle, pigs, goats, sheep, chickens, cats and more, and members of most of these species set off by themselves to make a zoological revolution.

Pigs are omnivorous, and there were more kinds of food available to them in and near the early European settlements in North America (the area north of the Rio Grande) than to any other species of imported animal. They came to the continent no later than 1540 with Hernando de Soto, and were running wild and thriving long before Englishmen came ashore at Jamestown or Plymouth.

Most horses came directly from Europe and moved westward with the pioneers of the Thirteen Colonies and New France - or even preceded them. Horses came to Virginia as early as 1620, to

Massachusetts in 1629 and to the French settlements in 1665. John Josselyn found plenty of horses in seventeenth century Massachusetts, "and here and there a good one." Their owners let most of them scavenge in the wilderness for their own feed, even in winter.

Wild horses were a major frontier pest. By 1671 in Maryland, for instance, they were mentioned as a serious threat to crops, and were deemed a nuisance on the Virginia frontier.

Within thirty years of the founding of Maryland, the settlers were complaining that their stocks of cattle were being "molested by reason of several heards of wilde Cattle resorting amonge their tame." A couple of human generations later cattle on the South Carolina and Georgia frontier were moving west "under the auspices of cowpen keepers, which move from forest to forest as the grass wears out or the planters appear."

In sugarless British North America, honey was the chief sweetener, and Europeans imported honey bees early. The first arrived in Virginia in the early 1620s, where honey became a common food in the seventeenth century. The bees came ashore in Massachusetts no later than the 1640s, and by 1663 were thriving "exceedingly," according to Josselyn. Bees moved into the interior faster than their alleged masters. The first honey bees west of the Mississippi are supposed to have settled in Mme. Chouteau's garden in St. Louis in 1792.

Oddly enough, very few of the creatures native to North America have ever gone wild in Europe. The grey squirrel, the muskrat, a few pestiferous insects like the Colorado potato beetle - and then the list trickles to a close.

Diseases. The spread of European plants and animals in North America was important to the spread of the Old World humans, providing them with cheap meat, milk, leather, and power. This should have benefited the Amerindians as well. They were capable of learning how to use the new plants and particularly the animals, and did so in many cases, such as the Sioux with the horse, and Navaho with sheep. A greater variety of food and access to more power than ever before should have stimulated their population growth. Instead, the birth rate plunged and death rate soared. Every tribe shrank in numbers initially, and many of them died out completely.

The Amerindians suffered greatly from brutality and alcohol, from the destruction of their game and loss of their farm land. Still all this seems insufficient to explain their near extinction.

Old World diseases were the Amerindians' worst enemy. The story of the United States begins with Virginia and Massachusetts, and their histories begin with epidemics. At the time of the colony at Roanoke Island in the 1580s the nearby Amerindians

> "began to die very fast, and many in short space, in some Townes about twentie, in some fourtie, and in one sixe score, which in trueth was very many in respect of their numbers. . . The disease also was so strange, that they neither knewe what it was, nor how to cure it, the like by report of the oldest men in the Countrey never happened before, timne out of minde."

When the Pilgrims settled at Plymouth, Massachusetts, in 1620, they did so at the site of a village and on a coast nearly cleared of Amerindians by a recent epidemic. The thousands who had lived there had, wrote one of the newcomers, "died in a great plague not long since: and pity it was and is to see so many goodly fields, and so well seated, without men to dress and manure the same."

Smallpox was probably the disease that affected the Amerindians the most. It had long existed in Europe, but had not been among the deadliest killers in the Middle Ages. Then in the sixteenth century it increased in malignancy, and for the next three hundred years was one of Europe's most widespread killers, carrying off a high proportion of every generation's newborn. These three centuries encompassed the entire colonial period for North America.

The first recorded epidemic of the disease in British and French North America occurred among the Algonkins of Massachusetts in the early 1630s. "Whole towns of them were swept away, in some not so much as one soul escaping Destruction."

Smallpox raged through New England, on west into the St. Lawrence-Great Lakes region, and from there no one knows how much further. In the late 1630s and 1640s the populations of the Iroquois and Huron confederations fell by an estimated fifty percent. Thereafter smallpox seems to have been active somewhere in the continent nearly every decade until its final eradication in our century. Every European people to establish major settlements in North America - the English, French, Dutch, Spanish, and Russian - recorded, sometimes in gloom, sometimes in exultation, the horrors of smallpox running loose among Amerindians who had never known it before.

The New World, in return for smallpox and such, had very little to offer. Chargas's disease and Carrion's Disease are native to the Americas, but have never been important in the Old World, nor even in North America. Syphilis may be American: it

was first recognized in Europe shortly after Columbus's return in 1493, but its ultimate origins are a matter of great controversy. Even if we accept it as America's one great contribution to the Old World's pool of infections, it is no match for the list of maladies that crossed the Atlantic in the other direction.

NOTE: This reading is adapted from:

Alfred W. Crosby. "Columbus and Ecological Imperialism." A paper presented at the Conference on Teaching About the Voyages of Columbus: A Turning Point in World History; Ball State University, Muncie, IN, April 6, 1989.

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